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SDCS-ER-75-17

(1)

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Eastern Idaho, 28 March 1975

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September 1975

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20 ABSTRACT (Continue on reverse side if necessary and identify by block number)		

SDCS Event Report No. 17

Eastern Idaho, 28 March 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	02:31:17	43 N	111 W	6.2	N/A
LASA	02:32:10	45.1N	108.1W	5.2	N/A
PDE	02:31:06	42.1N	112.5W	6.1	6.0

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

02:31:09 42.2N 112.3W 6.4 6.2

FN-WV was not operational for this event.

Short-period signals associated with this event were recorded at four SDCS stations, LASA and NORSAR. The magnification of the CPSO vertical channel is unknown. The number of instruments contributing to the summation calibration was not recorded. The time correction at WH2YK was approximately minus 9 minutes and 30 seconds.

Long-period signals were recorded at all operational SDCS stations and LASA. Long-period array data for ALPA and NORSAR were not recoverable.

SDCS short-period horizontal channels have been rotated to orientations radial and transverse to this event location. Long-period channels were not rotated due to signal clipping.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SEC'S	ELEVATION METERS	INSTRUMENTATION SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WW	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

HYPOCENTER DETERMINATION

INPUT FOR EVENT 28 MAR 75
 02:31:05.7 42.061N 112.548W 5KM.

STA.	ARRIVAL	SURF	PESIDUALS		DIST	AZ
			CALC	REST		
LAO	02 32 43.8	1.7	3.5	1.7	6.2	42.4
RK-ON	02 34 43.4	-2.6	-3.9	-2.6	15.4	49.7
CPO	02 36 01.2	-0.8	0.0	-0.8	21.8	98.0
WH2YK*	02 45 47.9	573.5 *	585.1 *	573.3 *	23.0	331.0
HN-ME	02 37 36.3	2.6	0.9	2.7	31.7	67.5
NAO	02 42 03.9	-0.9	-0.6	-0.9	67.3	26.4

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
02:31:09.1	42.237N	112.334W	0. SURF	2.1	3	E
02:30:17.1	41.459N	114.022W	-279. CALC	2.7	10	E
02:31:10.0	42.251N	112.301W	5. REST	2.1	3	E

SUPP	CALC	REST
0 : 1	0 : 1	0 : 1
0 : 0	0 : 0	0 : 0
0 : 2 1	0 : 0.2 1	0 : 0.2 1
0 : 0.1 0	0 : 0.1 0	0 : 0.1 0
0 : 0	0 : 0	0 : 0
0 : 0	0 : 0	0 : 0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF.. LEVEL, SDV= 1.94
 MAJOR 86.9KM. MINOR 57.0KM. AZ= 92 AREA= 15569 SQ.KM. SURF
 MAJOR 87.1KM. MINOR 56.9KM. AZ= 82 AREA= 15574 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 28 MAR 75
 02:31:05.7 42.061N 112.548W 5KM.

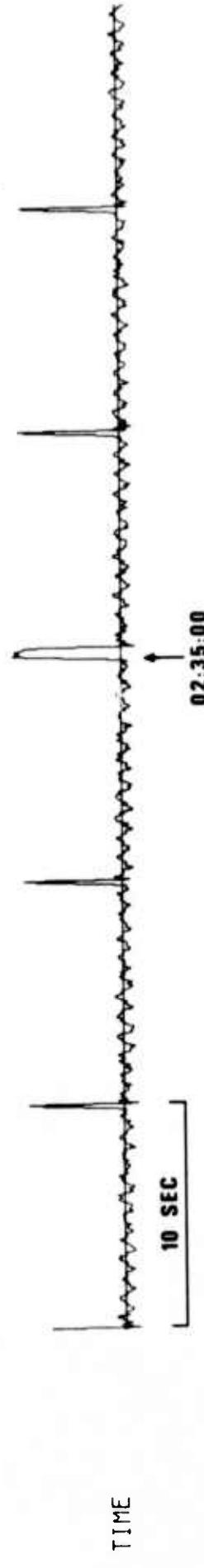
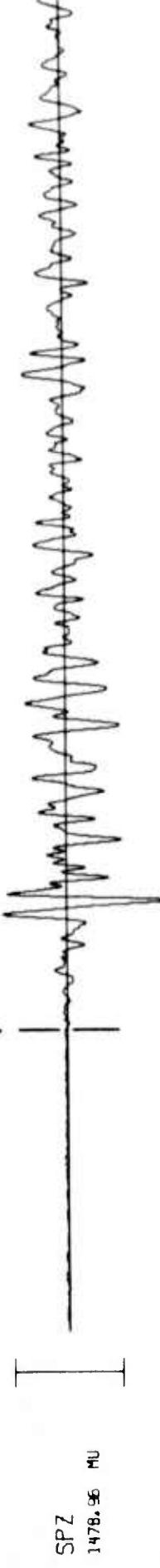
STA.	PHASE	ARRIVAL				MAGNITUDE			DIST
		TIME	INST	PER	A/T	MB	MS	DIP	
LAO	M	02 32 43.8	AB	0.9	5107.	7.02			6.2
LAO	LP	02 34 46.0	LPZ	18.0	??				6.2
RF-ON*	EP	02 34 43.4	SPZ	0.9	1955.	6.13			15.4
RK-ON	LR	02 41 01.0	LPZ	14.0	18769.				15.4
CPO	EP	02 36 01.2	SPZ	0.0	??				
CPO	LO	02 43 31.0	LPT	30.0	10316.				
CPO	LR	02 44 54.0	LPZ	19.0	CLIPPED				21.8
WH2YF*	FP	02 45 47.0	SPZ	4.0	2929.	6.46			23.0
WH2YK	LR	02 54 01.0	LPZ	17.0	3024.		5.96		23.0
HN-MF	FP	02 37 36.3	SPZ	1.5	582.	6.15			31.7
HN-ME	LP	02 50 50.0	LPZ	18.0	5439.		6.36		31.7
NAO	FP	02 42 03.0	AB	1.5	859.	6.62			67.3
<hr/>									
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
02:31:09.1	42.237N	112.334W	0. SURF	6.40	0.33	2	6.16	0.3	2
02:30:17.1	41.459N	114.022W	0. CALC	6.40	0.33	2	6.17	0.3	2
02:31:10.0	42.251N	112.301W	5. PEST	6.39	0.33	2	6.16	0.3	2

Short-period magnitudes (mb) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

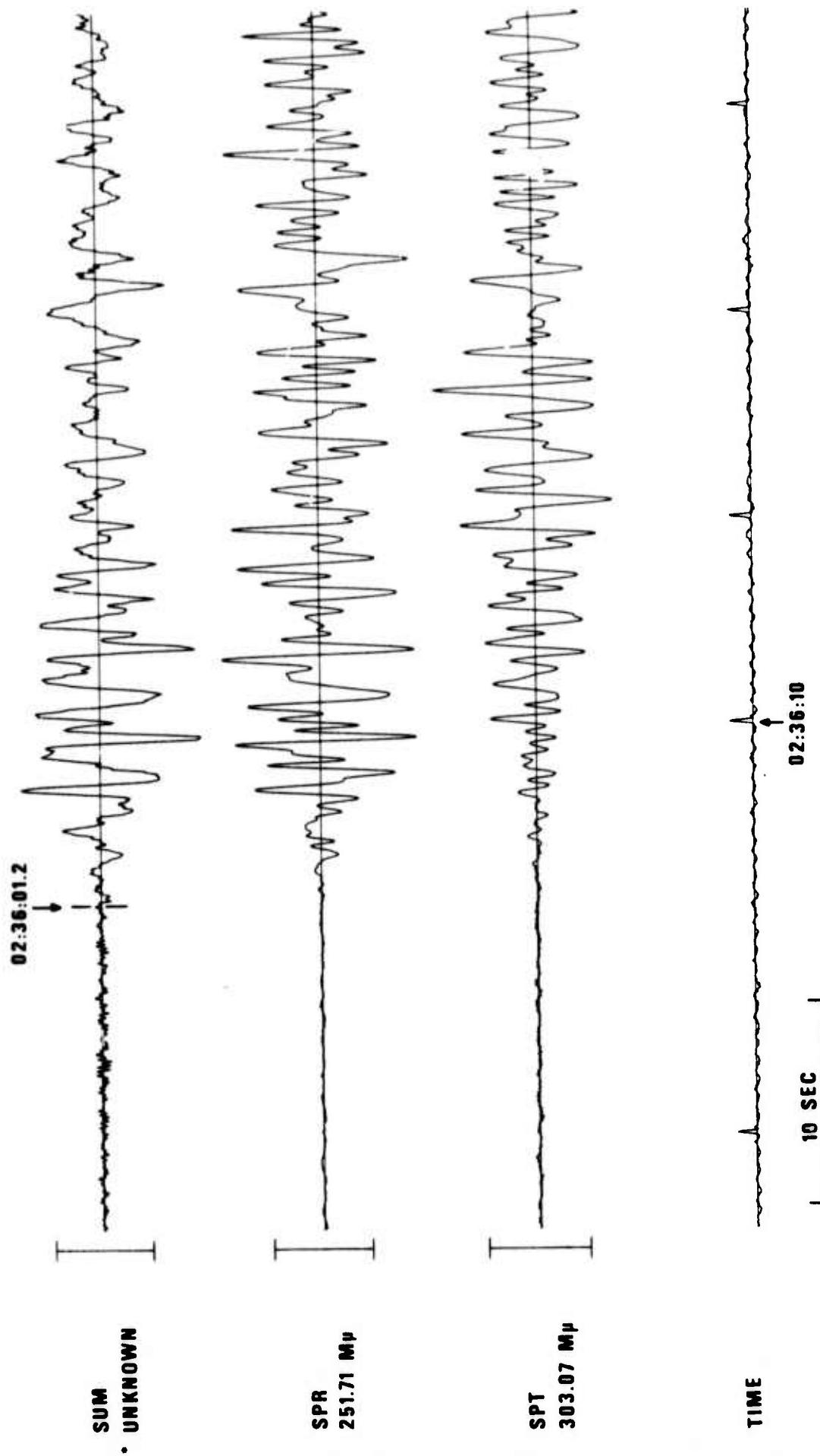
Average long-period magnitude (Ms) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RK-ON 28 MAR 75

02:34:43.4

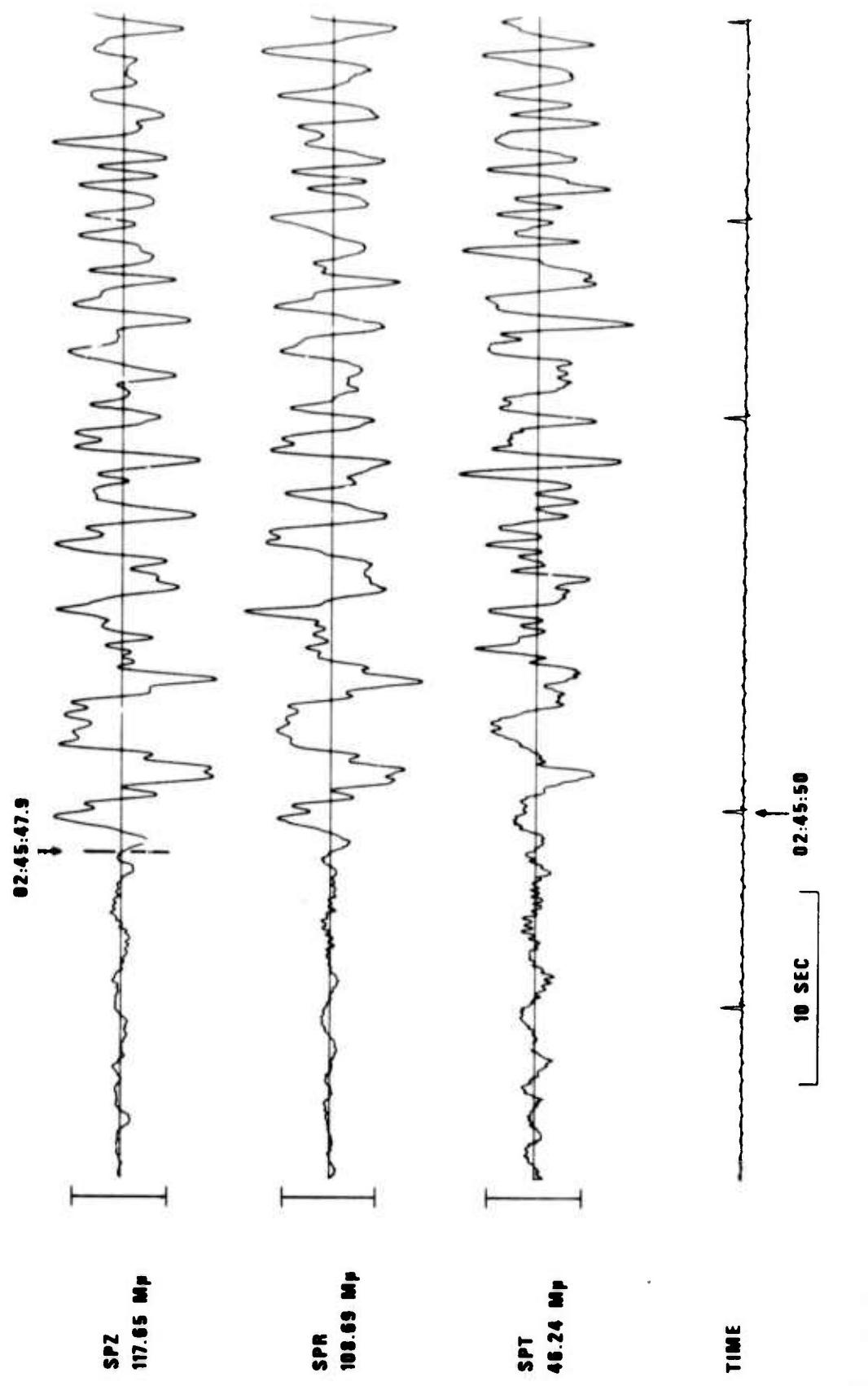


CPSO 28 MAR 75



• (NUMBER OF INSTRUMENTS IN SUMMATION UNKNOWN)

WH2YK 28 MAR 75



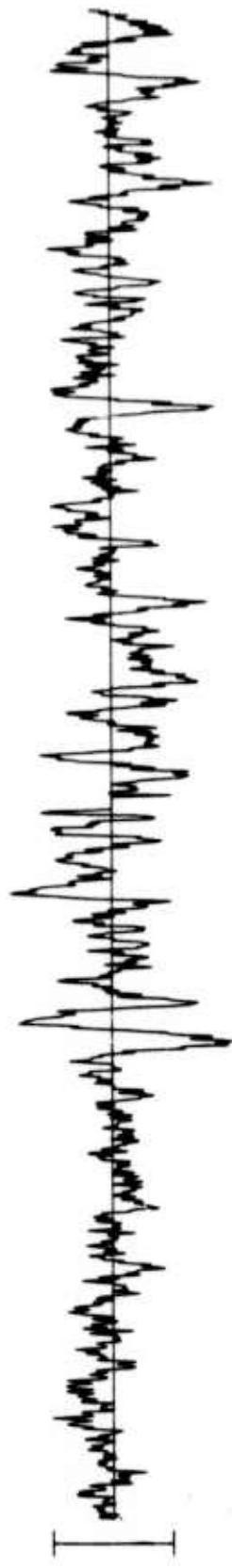
(APPROXIMATE -9 MINUTE 30 SECOND TIME CORRECTION)

HN-ME 28 MAR 75

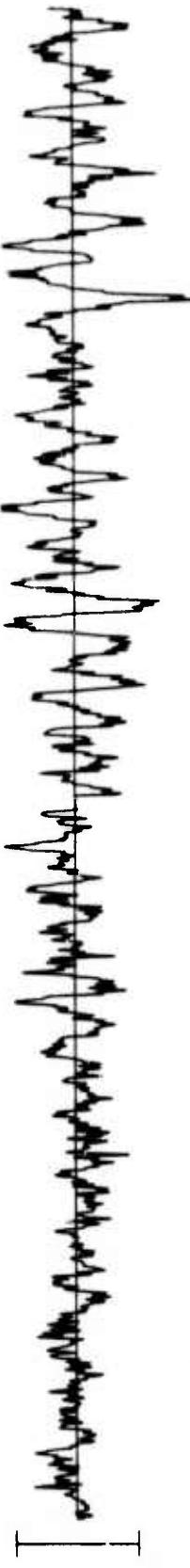
02:37:36.3



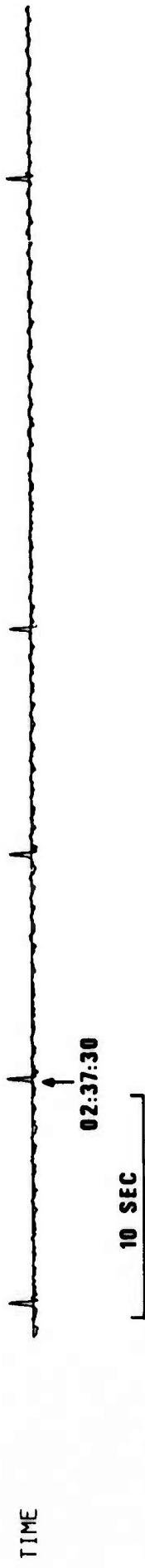
SPZ
143.09 MU



SPR
75.77 MU



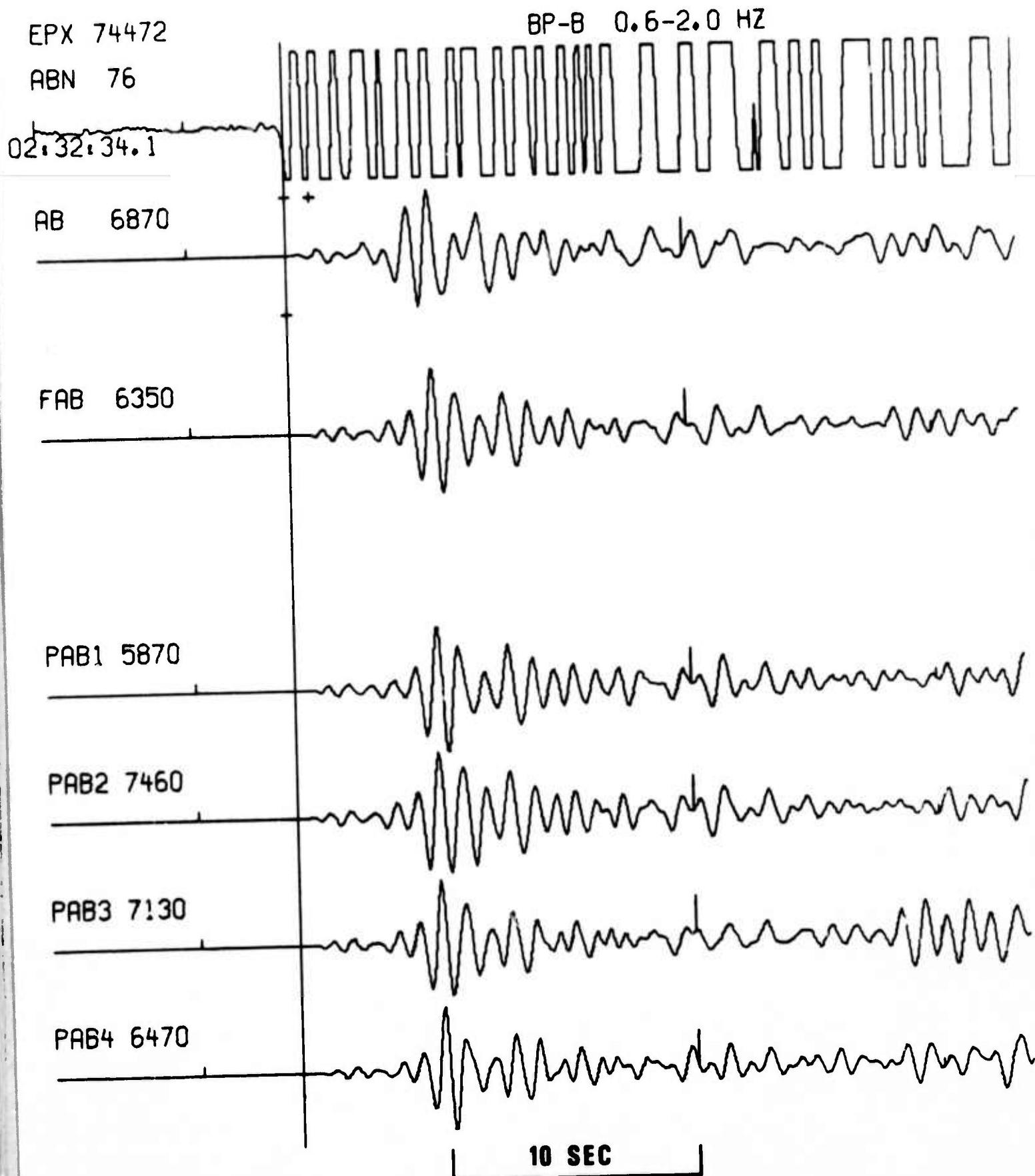
SPT
80.30 MU



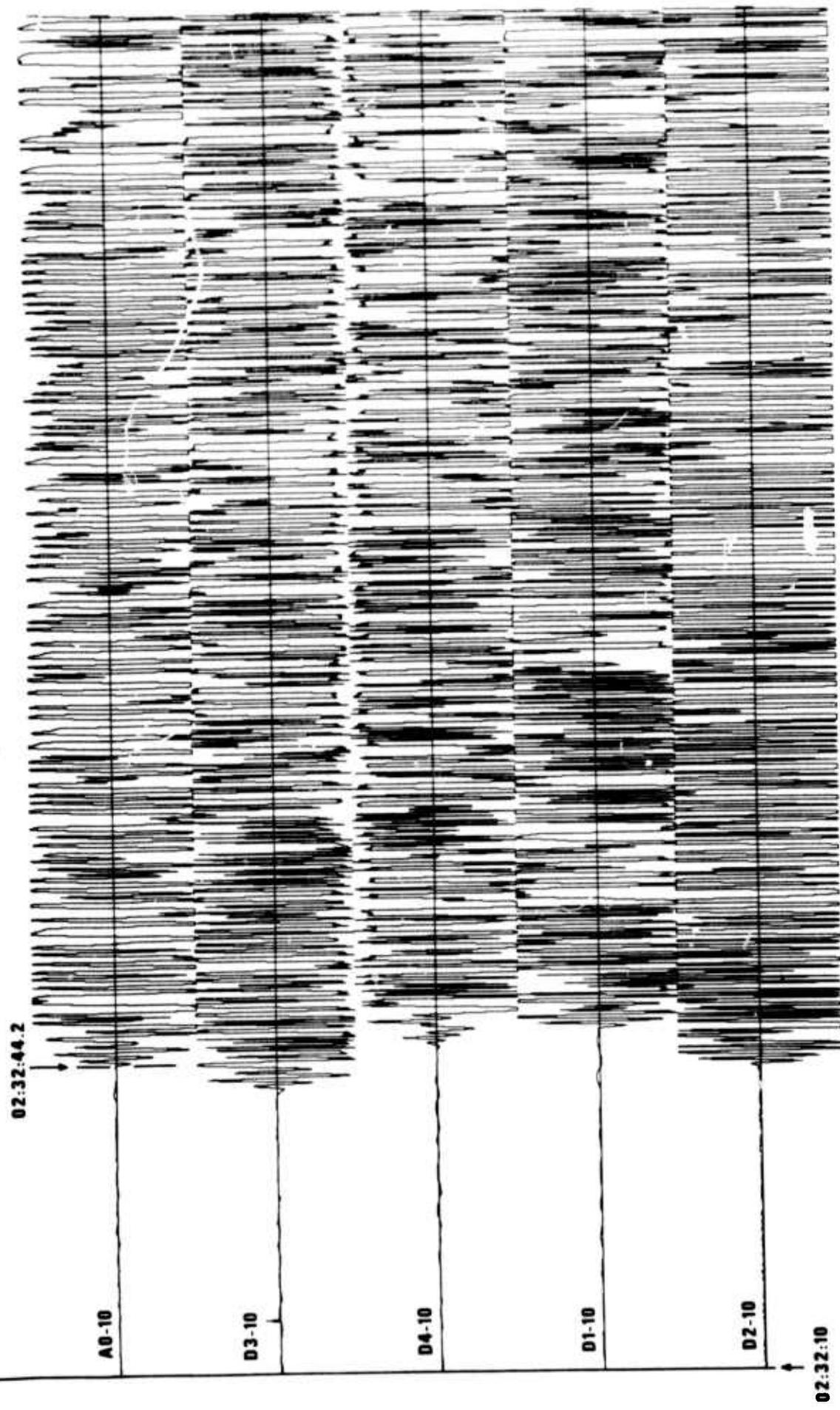
02:37:30

LASA

1 28 MAR 1975
2 2 32 10 45.1N 108.1W OG B 5.3 456 MONTANA
3 2 32 44.1 LAO P 3173.0 1.0 8.1 2.0 221.6



LASA (INDIVIDUAL SHORT-PERIOD INSTRUMENTS) 28 MARCH 75 HIGH GAIN SENSORS



(ND AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

LASA (INDIVIDUAL SHORT-PERIOD INSTRUMENTS) 28 MARCH 75
PADDED SENSORS (-30 dB)

02:32:42.2

A0-10

D3-10

D4-10

D1-10

D2-26

02:32:10

10 SEC |

(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

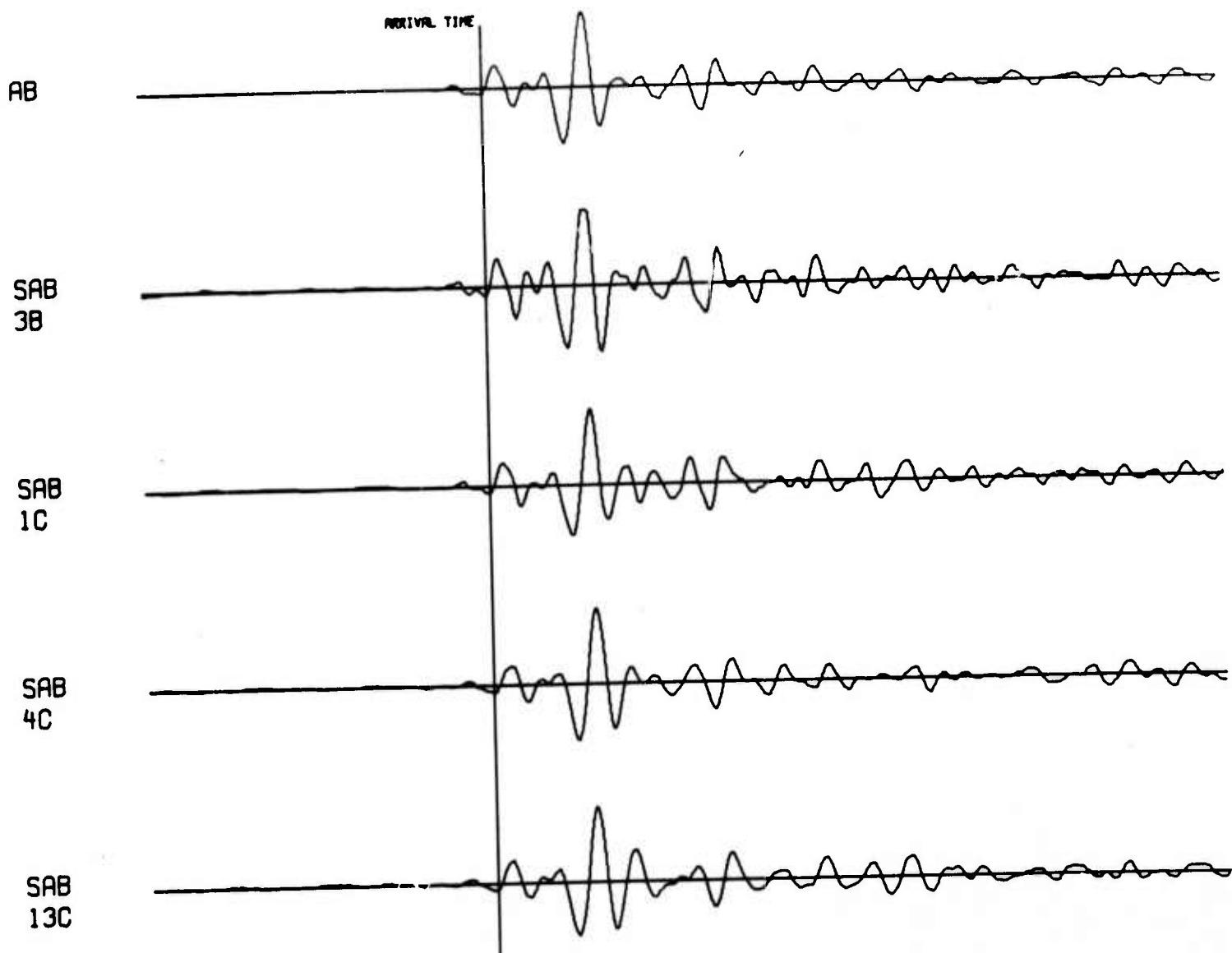
NORSAR EVENT FILE

1975 MAR 28

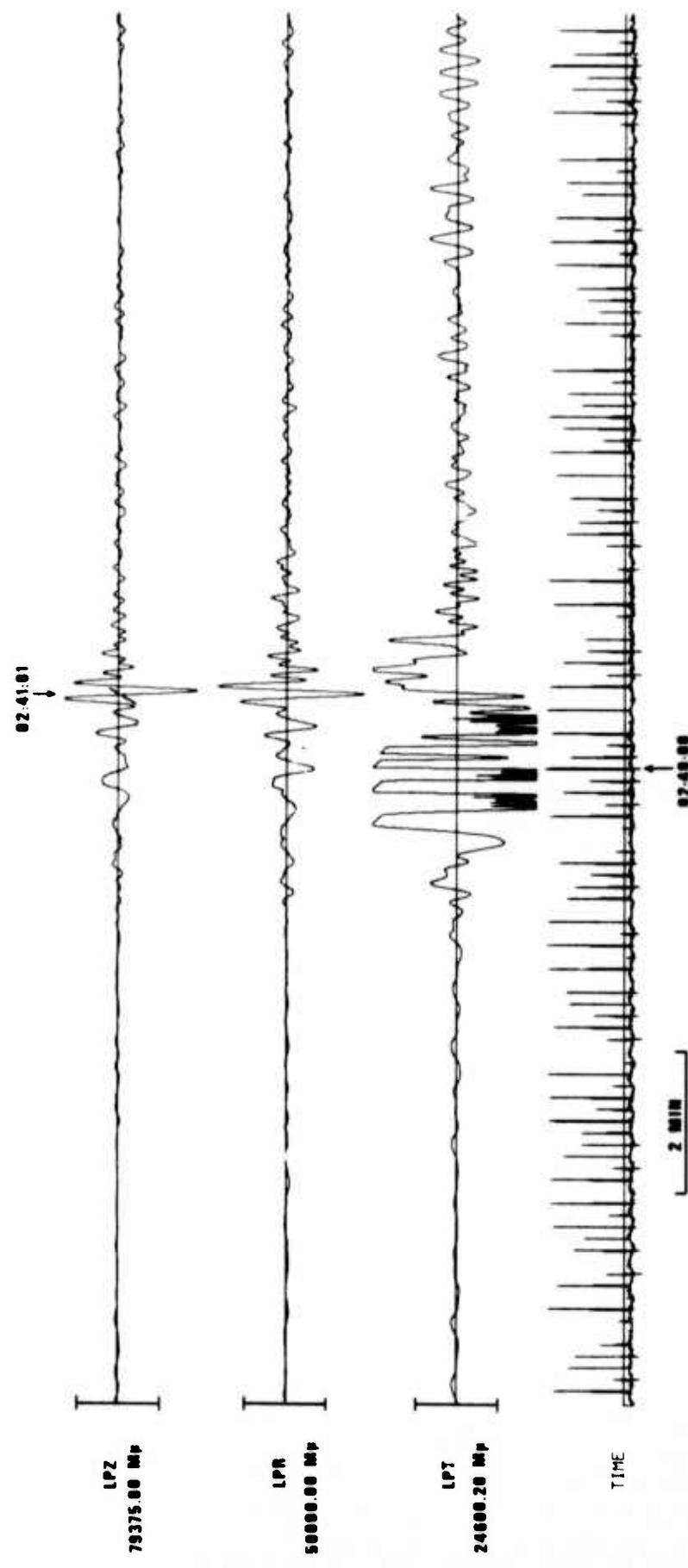
EPX NO. 79090 ARR. 2.42.5.7 42.7N 111.2W 5.9MB 33KM

DIST = 66.6 AZI = 317.1 AMP = 165.5 PER = 1.4 UMETH 2

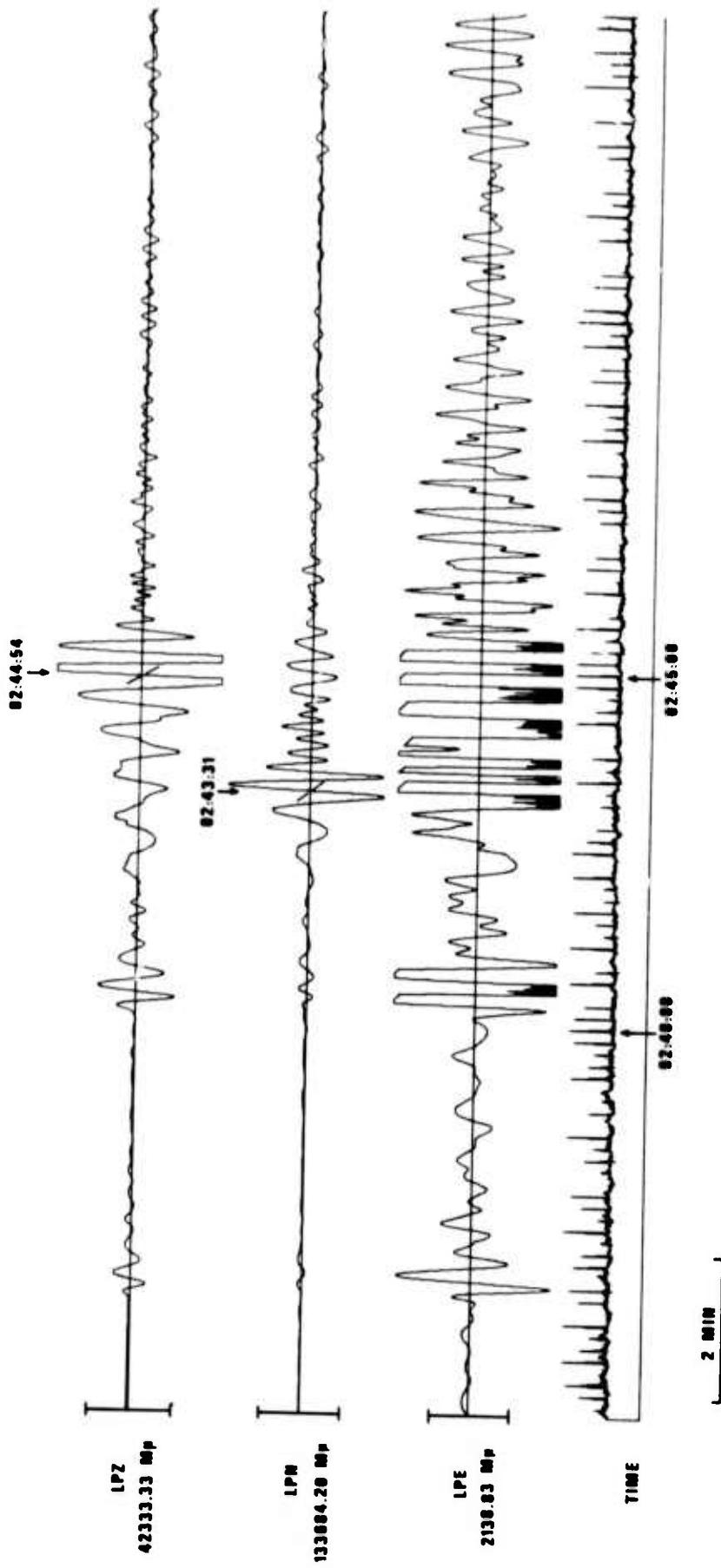
SCALE [] = 5 SECONDS



RK-ON 28 MAR 75

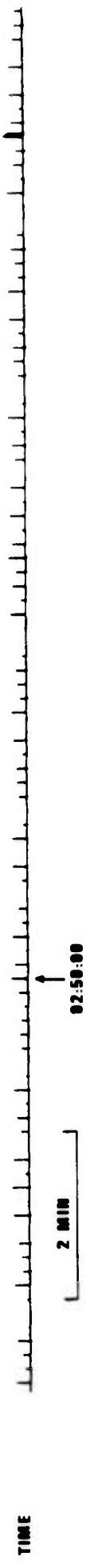
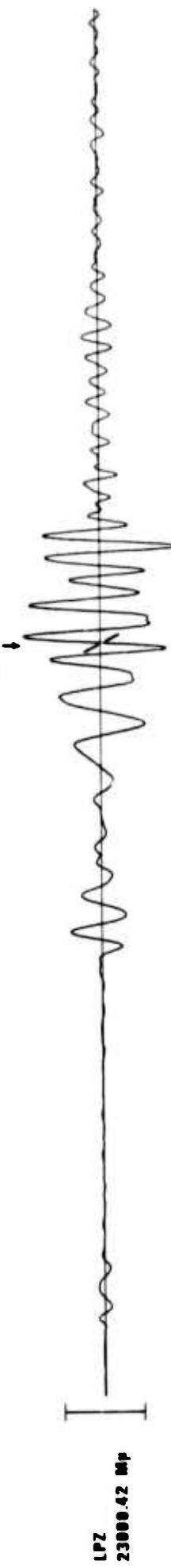


CPSO 28 MAR 75



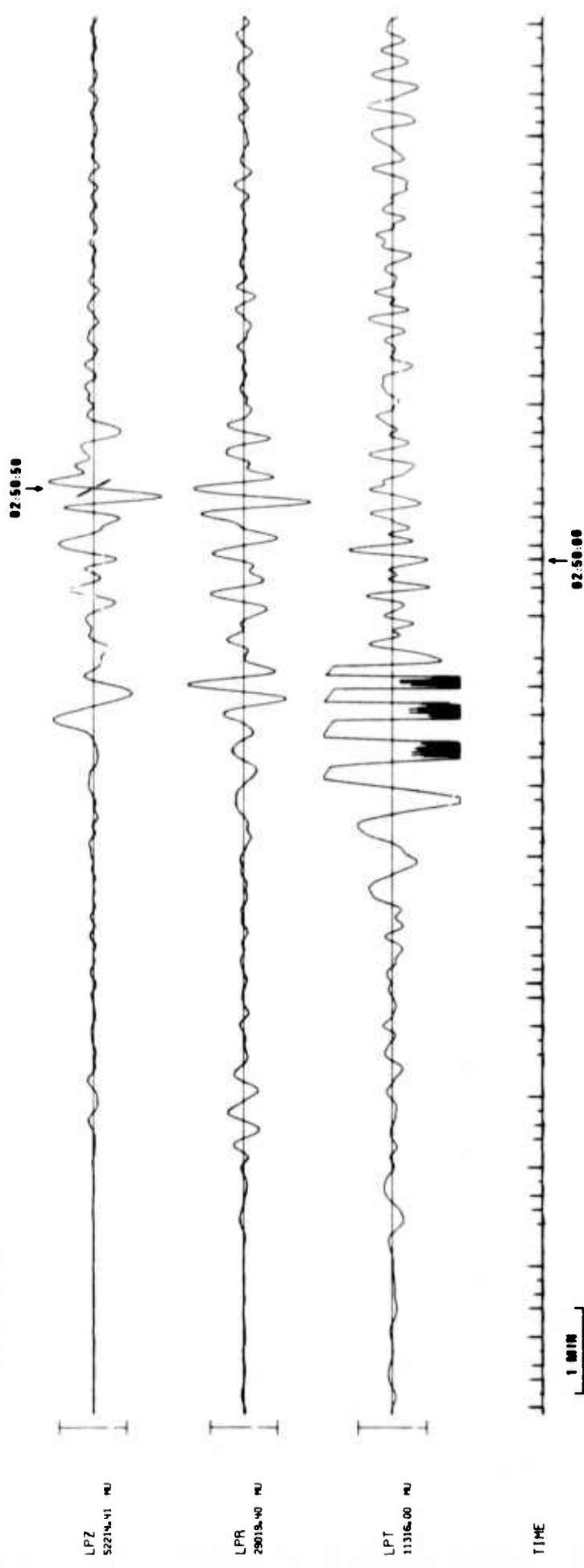
WH2YK 28 MAR 75

02:54:01

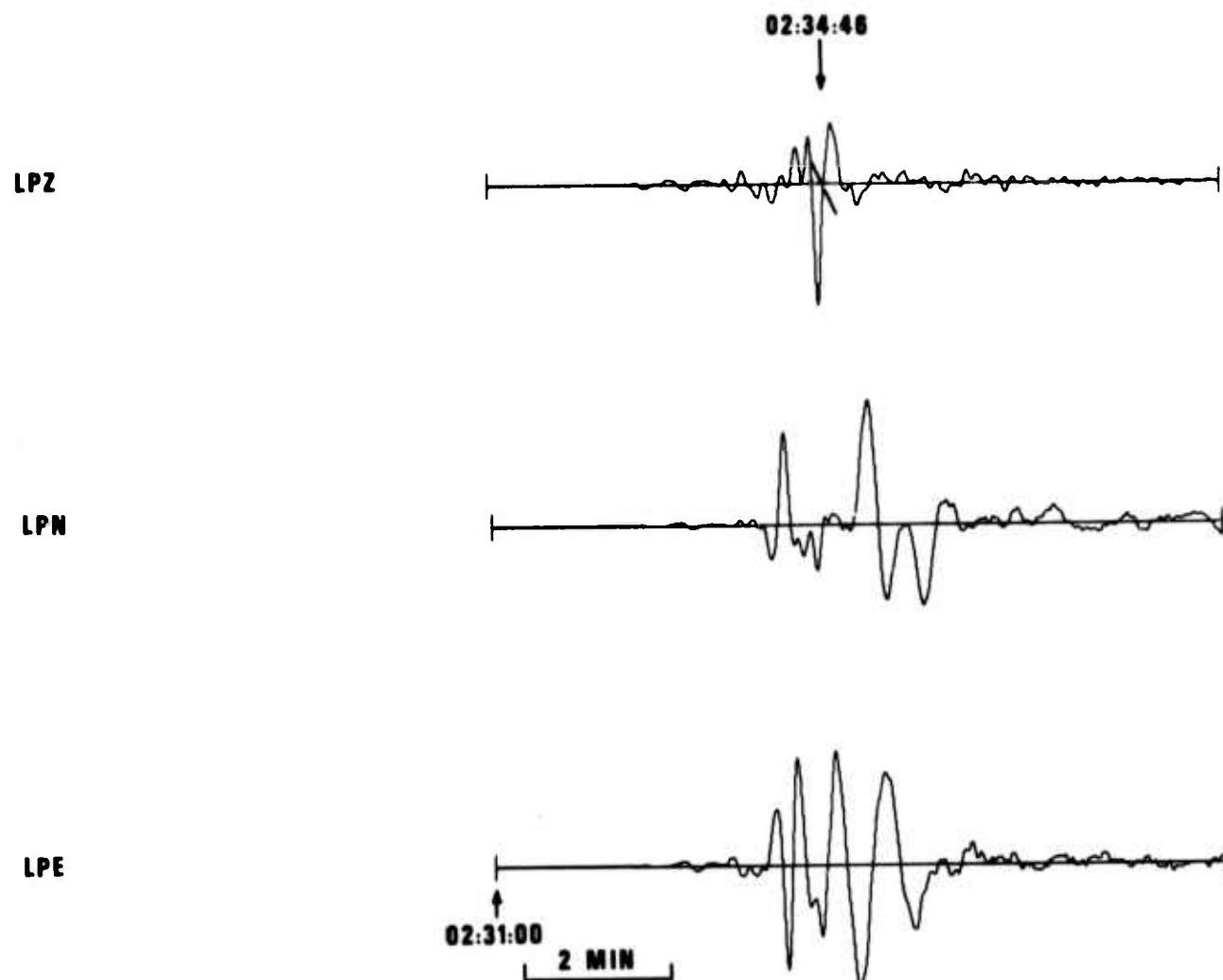


(APPROXIMATE - 9 MIN 30 SEC TIME CORRECTION)

HN-ME 28 MHR 75



LASA C2 SUBARRAY 28 MAR 75



(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)